

# MC generation for the B group

- Realistic MC update/remind
- Existing samples summary
- Plan: requested samples
- Developments: SAM-store and filters

# Monte Carlo samples for B-group

## Some statistics for summer production ( > 4.10.0int3) :

- Number of official samples: 44
- Number of events simulated: 35,323,897
- No. of events produced and stored to disk: 13,087,953
- Most samples are on CAF server only fcdpdata032
- 12 bigger samples are on DFC, available via dCache.
- List available from web page

[http://www-cdf.fnal.gov/internal/physics/bottom/realisticMC/available\\_samples.html](http://www-cdf.fnal.gov/internal/physics/bottom/realisticMC/available_samples.html)

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- Follow the links for full information on the sample
- Look also for the **filtered samples**, when available.

*All the above sample produced in Glasgow (cdfg/scotgrid)*

# Monte Carlo samples for B-group

## Structure of realistic B-MC :

- Step 1
  - Generation (Only Pythia and Bgenerator used to now)
  - Simulation with Silicon clustering
- Step 2
  - Trigger Simulation TRGSim++ 4.9.1hpt3
- Step 3
  - svtfiler or Prereq
  - Production ← Use mcProduction here

} cdfSim

Tcl files are produced the same way as in standard MC, but number of events and run number change:

Use script ./multirun.pl with input list of runs.

Input: total number of events, max events per job (Filter included !)

**>= 1 job per run number**

Tar file available from [fcdflnx2/scratch/dauria/jim\\_submit](http://fcdflnx2/scratch/dauria/jim_submit)

# Monte Carlo samples for B-group

Plan:

- Generic samples:
  - At least 2 big samples requested: hadronic and l+svt details to be defined
- Inclusive samples
  - J/Psi X with Pythia
- Single-channel decay:
  - many samples, including charm. ← charm has low trigger efficiency.

## Monte Carlo samples for B-group

### Developments:

- Smart filters required to improve efficiency
- Use SAM to store files and to make bookkeeping. Tests were good. It will improve.
- Move from web page to searchable database.

### Problem report:

- QQ decayer has bad behaviour in 4.11.2 for lifetimes
- HepgFilter had limit to  $\text{pdg} < 10000$  (excluding D1 (aka 1P10) )